

# Chloride FP-40R

## Rectifier - battery charger

■ Industrial Power for  
*Business-Critical Continuity™*

**The Chloride FP-40R industrial rectifier is the result of engineering research in product simplification to offer an SCR-based standardized design with improved reliability and adaptability to industrial requirements.**

The Chloride FP range is designed to meet the most demanding schedules of industrial projects.

Each Chloride FP product includes a wide choice of ratings and a selection of industrialized and pre-configured options to allow the product to be quickly configured and delivered.

### Benefits

- **Improved reliability** provided by a fully controlled SCR bridge and a reduced quantity of components
- **Adaptability** thanks to a selection of industrialized options and an easy parameter settings for quick on-site adjustments
- **Simplicity** of the product design to improve MTBF and to reduce MTTR

### Key Features

- **Low Ripple Voltage** to optimize battery life
- **Low inrush current** < 8In not to oversize mains power supply (3-phase)
- **Compact design** with the capability to integrate the battery in the charger cabinet
- **Human-Machine Interface (HMI)** choice to deliver appropriate information level to the user
- **Ingress protection up to IP55** for harsh environmental conditions
- Compatibility with Nickel-Cadmium and Lead-Acid batteries, open or gas-recombination types
- Galvanic isolation between input and output
- Digital control and monitoring
- Wide choice of configurations and options

### Applications

The Chloride FP-40R suits all DC applications requiring large battery back-up of the following industries:

- Power Transmission and Distribution
- Continuous process industries
- Petrochemical and Chemical industries
- Water & Wastewater industries

### Flexibility for a wide scope of DC applications

The Chloride FP-40R is available from 25A to 100A in single-phase input configuration, and up to 400A in three-phase input configuration. It offers a wide range of output voltages, from 24 Vdc to 220 Vdc.

The Chloride FP-40R is suitable for use either as a battery charger, a rectifier or as a DC power supply. It features a microprocessor control which offers exceptional stability and allows adaptability for different application requirements.

To further improve load availability and process reliability, the Chloride FP-40R is able to operate in dual parallel configuration.



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### Ratings - Output Current (A) vs Output Voltage (Vdc)

Ratings with single-phase input:

24Vdc	48Vdc	110-125Vdc	220Vdc
-	-	25	25
-	40	40	
-	60	60	
100	100	100	

Ratings with three-phase input:

-	-	35	35
-	65	65	65
100	100	100	100
160	160	160	160
220	220	220	220
300	300	300	300
400	400	400	400

### Technical Data

#### Input

	FP-40R10 (Single-phase)	FP-40R30 (Three-phase)
Model		
Input voltage (other voltage on request)	230 VAC ±10%	400 VAC ±10%
Inrush current	< 15In	< 8In
Power factor	0.7 (typical)	0.8 (typical)
Frequency range	From 47 to 63 Hz	

#### Output

Available ratings (see table above)	25 to 100 A	35 to 400 A
Nominal DC voltage	24, 48, 110, 125, 220 VDC	
Static regulation	0.5 %	
Ripple voltage (disconnected battery)	< 0.7 %	
Float voltage range	From 0.70 Un to 1.47 Un	
Charge voltage range	From 0.73 Un to 1.60 Un	
Equalization voltage range	From 0.83 Un to 1.70 Un	

#### Battery

Type	Lead Acid or Nickel Cadmium, vented or recombination
Autonomy	From few minutes to several hours, as required

#### General Data

Rectifier efficiency	From 83 % to 94 % (according to model)
Operating temperature	From 0 to 40 °C
Storage temperature	From -20 °C to +70 °C (battery excluded)
Relative humidity	<95 % non condensing at 20 °C
Operating altitude	1000 m (without system derating)
Cooling	Fan-assisted
External ingress protection	IP 20
Noise	<60 dB
Input / output isolation	2500 VAC / 1 minute
Frame colour	RAL 7035
Dimensions	Varying according to ratings and options (consult us)

### Options

Charger	Paralleling diode Dropping diode DC earth fault monitor Ultra low ripple voltage <0.1% Isolated communication interface, RS 485, Modbus Front panel LEDs status annunciator
Battery	Protection against battery reversed polarity Battery Low Voltage Disconnection (LVD) Batteries in charger cabinet (on shelves or drawers) Temperature sensor for battery charge compensation
Mechanical	External ingress protection IP21, 23, 40, 41, 43, 55 Space heater Input / output terminal wiring Internal ingress protection with open door IP20 Internal lighting Lifting eyes
Load	Distribution board (circuit breaker with or without contact)

### Standards

Compliance	IEC 61000-6-4 - IEC 61000-6-2 - IEC 61000-6-4 IEC 60146 - IEC 60439-1 - NFC 58-311
Conformity	EMC Directive 2004/108/CE Low voltage Directive (LVD) 2006/95/CE



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FP40R-DSUK-Rev1-01/2013